

**Amendments to the Specification:**

Rewrite the paragraph that begins on page 12, line 18, as follows:

Fig. 5 is a block diagram describing the architecture for the interference canceller of the disclosed invention, according to one embodiment of the invention.

Fig. 6 is a block diagram describing the architecture for the interference canceller of the disclosed invention, according to another embodiment of the invention.

Fig. 7 is a block diagram describing the architecture for the interference canceller of the disclosed invention, according to another embodiment of the invention.

Rewrite the paragraph that begins on page 13, line 12, as follow

The proposed IC approach in accordance with the present invention is described in Fig. 5. According to the invention, the regenerated estimated signal 102 is first despread in the IC block 500 by a plurality of blocks (fingers) 161-164 for each user using the spread spectrum code of that user at the appropriate time instant defined by the estimated delay of each multipath for that user. The subtraction of the estimated interference from each multipath of each user is performed after despreading in the plurality of blocks 171-174. The estimated multipath component for the desired user is subsequently added in the plurality of blocks 181-184. Alternatively, the order of the subtracting and adding steps can be reversed, as illustrated in IC block 510 of Fig. 6. Clearly, the order of blocks 171-174 and 181-184 in IC block 500 of Fig. 5 can be reversed without affecting the invention, as shown in IC block 520 of Fig. 7. Finally, the multipaths of each user are combined in

a plurality of decision circuits such as Rake receiver combiner blocks 191-192 and tentative decisions are made regarding the information symbol of each user's signal. In an alternate design, the decisions can be made with an equalizer circuit. Using the same notation as in Equation (1), the equation describing the despread signal for the  $l^{\text{th}}$  path of the  $k^{\text{th}}$  user with the proposed IC at the  $i^{\text{th}}$  stage ( $i>0$ ) is

$$D_{k,l}^{(i)} = D_{k,l}^{(0)} - w_k^T \left( \sum_{k',l'} w_k \cdot c_{k',l'} d_{k'}^{(i-1)} \right) + c_{k,l} d_k^{(i-1)} \quad (2).$$